48. Byrnestad, K., Babbitt, B., Huang, L., Rouse, B. T. (1990) Influence of peptide acylation, liposome incorporation, and synthetic immunomodulators on the immunogenicity for subunit vaccines. *J. Virol.* 64(2): 680–685.

This invention may be embodied in other forms or carried out in other ways without departing from the spirit or essential characteristics thereof. The present disclosure is therefore to be considered as in all respects illustrative and not restrictive, the scope of the invention being indicated by the appended claims, and all changes which come within the meaning and range of equivalency are intended to be embraced therein.

What is claimed is:

1. A multiple antigen peptide system comprising a dendritic core to which are covalently attached at least one peptide and a lipophilic membrane anchoring moiety, wherein said multiple antigen peptide system exhibits adjuvant properties and when injected into a mammal, is capable of cliciting a full immune response provided by both humoral and cell mediated immunities including a cytotoxic T lymphocyte immune response.

2. The multiple antigen peptide system of claim **1** wherein said lipophilic membrane anchoring moiety comprises a constituent selected from the group consisting of a lipoamino acid, a liposome, a saponin derivative alone or in admixture with cholesterol, and a suitable surfactant material.

3. The multiple antigen peptide system of claim **2**, wherein said lipophilic membrane anchoring moiety comprises a lipoamino acid.

4. The multiple antigen peptide system of claim **1** wherein said dendritic core comprises a bifunctional unit.

5. The multiple antigen peptide system of claim **1** further comprising a covalently attached T cell epitope.

6. The multiple antigen peptide system of claim **3** wherein said lipoamino acid is derived from amino acids selected from the group consisting of cysteine, lysine, serine and mixtures thereof.

7. The multiple antigen peptide system of claim **6** wherein said lipophilic membrane anchoring moiety comprises tripalmitoyl-S-glycerylcysteine.

8. The multiple antigen peptide system of claim **6** wherein said lipophilic membrane anchoring moiety comprises dipalmitoyl-S-glycerylcysteine.

9. The multiple antigen peptide system of claim **6** wherein said lipophilic membrane anchoring moiety comprises palmitoyl lysine.

10. The multiple antigen peptide system of claim **3** wherein said lipoamino acid is covalently attached through a peptide bond to an amino acid polymer comprising a peptide.

11. The multiple antigen peptide system of claim **10** wherein said peptide is a lipopeptide.

12. The multiple antigen peptide system of claim **5** wherein said T cell epitope is covalently linked to said peptide.

13. The multiple antigen peptide system of claim **12** wherein said T cell epitope is covalently linked in tandem to said peptide.

14. The multiple antigen peptide system of claim **5** wherein said T cell epitope is at least seven amino acids long.

15. The multiple antigen peptide system of claim **5** wherein the T cell epitope is a cytotoxic T cell epitope.

16. The multiple antigen peptide system of claim **5** wherein the T cell epitope is a helper T cell epitope.

17. The multiple antigen peptide system of claim **5** wherein the T cell epitope is derived from an HIV-1 protein.

18. The multiple antigen peptide system of claim **17** wherein the HIV-1 protein is the HIV-1 envelope glycoprotein.

19. The multiple antigen peptide system of claim **1** wherein said system is encapsulated within a liposome.

20. The multiple antigen peptide system of claim **1** wherein said dendritic core comprises lysine.

21. The multiple antigen peptide system of claim **1** wherein said peptide is between 10 and 40 amino acids long.

22. The multiple antigen peptide system of claim **5** further comprising a B cell epitope.

23. The multiple antigen peptide system of claim **22** wherein the B cell epitope and the T cell epitope are linked on the same functional group of the dendritic core.

24. The multiple antigen peptide system of claim **4** wherein said dendritic core is tetravalent.

25. The multiple antigen peptide system of claim **2** wherein said suitable surfactant material comprises a mixture of long chain polyoxyethylenes and polyoxypropylenes.

26. The multiple antigen peptide system of claim **4** wherein the bifunctional unit comprises an amino acid selected from the group consisting of cysteine, lysine, aspartic acid, glutamic acid, and ornithine.

27. The multiple antigen peptide system of claim **26** comprising eight free functional groups in the dendritic core and eight peptides, wherein each of the eight peptides is attached to each of the eight free functional groups, thereby forming an octavalent multiple peptide antigen.

28. The multiple antigen peptide system of claim **27** further comprising eight covalently attached T cell epitopes.

29. The multiple antigen peptide system of claim **28** wherein the T cell epitopes are derived from an HIV-1 protein.

30. The multiple antigen peptide system of claim **28** wherein the lipophilic membrane anchoring moiety comprises a constituent selected from the group consisting of a lipoamino acid, a liposome, a saponin derivative alone or in admixture with cholesterol, and a suitable surfactant material.

31. The multiple antigen peptide system of claim **30** wherein the lipophilic membrane anchoring moiety is a lipoamino acid derived from an amino acid selected from the group consisting of cysteine, lysine, serine and mixtures thereof.

32. The multiple antigen peptide system of claim **30** wherein the lipophilic membrane anchoring moiety is a lipoamino acid selected from the group consisting of tripahnitoyl-S-glycerylcysteine, dipalmitoyl-S-glycerylcysteine, and palmitoyl lysine.

33. A method for generating antibodies in a mammal, said method comprising administering to said mammal an antibody-generating amount of the multiple antigen peptide system of claim **1**.

34. A method for generating antibodies in a mammal said method comprising administering to said mammal an antibody-generating amount of the multiple antigen peptide system of claim **32**.

35. A method for generating antibodies in a mammal said method comprising administering to said mammal an antibody-generating amount of the multiple antigen peptide system of claim **23**.

36. A method for generating antibodies in a mammal said method comprising administering to said mammal an antibody-generating amount of the multiple antigen peptide system of claim **5**.

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